ABSTRACT

The invention concerns an aprotic electrolytic composition located in the separator and in at least one composite electrode containing a powder of an active electrode material, and if necessary an electronic conduction additive of an electrochemical generator. The electrolytic composition comprises a first polymer matrix consisting of a polyether and at least a second polymer matrix, macroscopically separated, and also at least an alkaline salt as well as a polar aprotic solvent: The polymer matrices are capable of being swollen by at least one of the polar aprotic solvents. The solvent or mixture of solvents is unevenly distributed between the polymer matrices. The invention also concerns an electrochemical generator comprising a negative electrode and positive electrode reversible to alkaline ions and a separator with polymer electrolyte, the electrolytic component of which is the composition described above. The invention further concerns the manufacture in two or three steps of a sub-assembly of an electrochemical generator by coating an electrode support with a composite electrode containing the second matrix, followed by a surface coating on the electrode resulting from the preceding step with a solution containing the first polymer matrix so as to form the separator wholly or partly.